1

PURPOSE AND NEED FOR ACTION

INTRODUCTION

The South Dakota Resource Management Plan (RMP) describes general management direction for the short term (5 years) to the long term (15 years) for two specific issues and other activities in the South Dakota Resource Area and analyzes the environmental effects of implementing such direction. It has been prepared in response to Section 202 and 603 of the Federal Land Policy and Management Act (FLPMA) of October 21, 1976. This law directs the Bureau of Land Management (BLM) to develop, maintain and, when appropriate, revise plans for the use of public lands. This document meets the requirements of FLPMA, National Environmental Policy Act (NEPA), and land use planning regulations in 43 CFR Part 1600. Also, it is responsive to litigation against the BLM requiring the BLM to prepare Environmental Impact Statements (EIS) which address the impacts of grazing livestock on the public lands, (Natural Resources Defense Council vs. Morton 527 F. 2nd 1386 U.S. App. D.C. 1977, cert. denied 427 U.S. 913).

The purpose of the RMP is to guide management actions on public lands based on current information, sound criteria and public input. The RMP provides the basis for resource utilization and defines and guides management decisions. The objective of land use planning is to guide the future use of public resources for the maximum public benefit through the concepts of multiple-use management and sustained yield.

The alternatives in this plan apply only to public lands and minerals administered by the BLM.

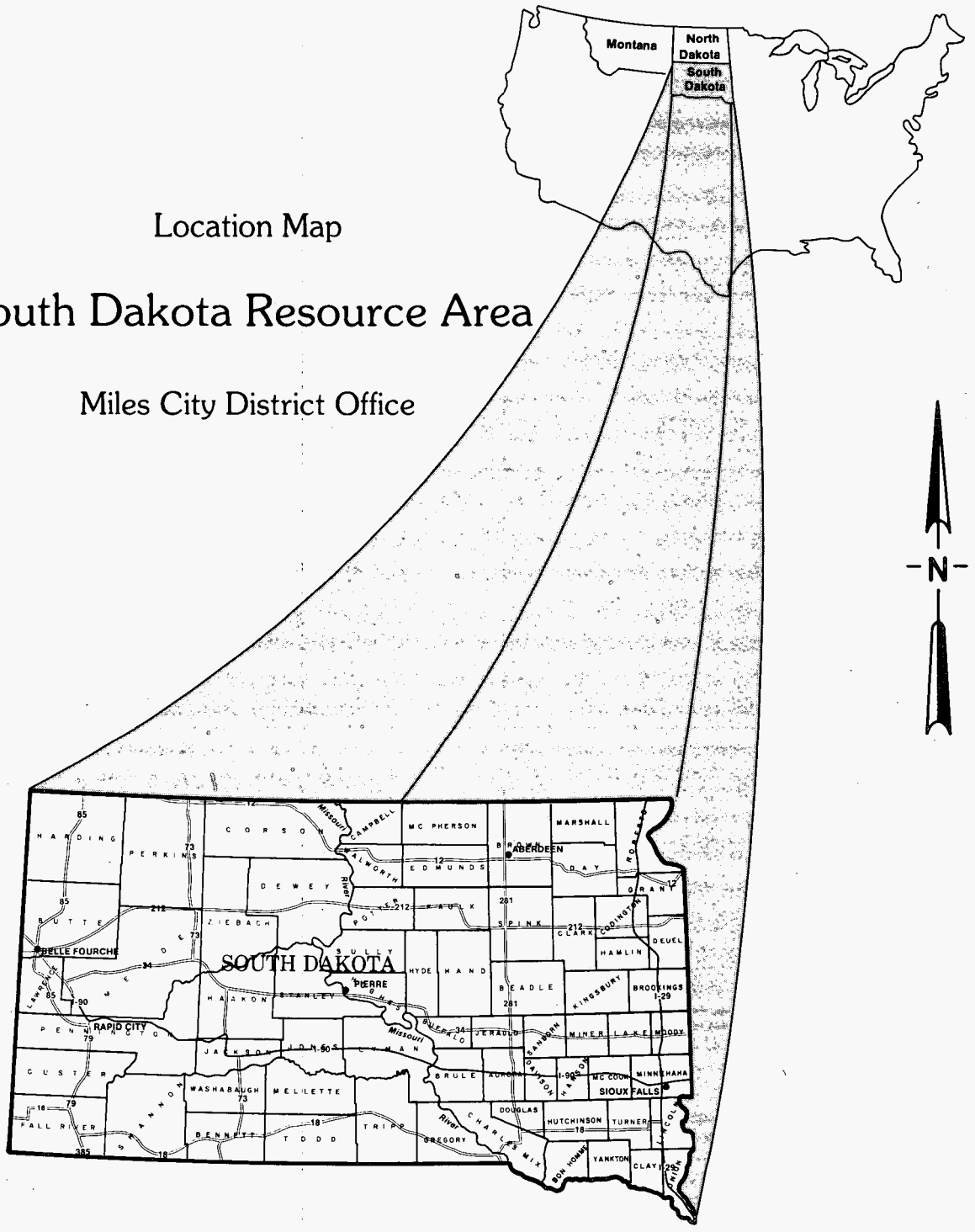
SETTING

The South Dakota Resource Area encompasses 280,672 surface acres within the entire State of South Dakota. This BLM-administered public land accounts for only 0.5 percent of the surface acres in the state. Most of the public domain surface estate (**278,662** acres) is located in the

Location Map

South Dakota Resource Area

Miles City District Office



MAP 1-1

western half of the state in the counties of: Brule, Butte, Custer, Fall River, Haakon, Harding, Jackson, Lawrence, Lyman, Meade, Pennington, Perkins, and Stanley counties (Map 1-1). In addition, BLM has management responsibilities for 5,294,122 acres of subsurface minerals (including minerals in the Black Hills National Forest, the Buffalo Gap National Grasslands, the Custer National Forest, the Ft. Pierre National Grasslands and the Grand River National Grasslands). Surface and subsurface ownership is generally in a fragmented pattern due to a complex history of homestead grants. (See Resource Management Plan Map in map pocket.) The situation where coal is the only federal mineral reserved was as a result of patenting under the Enlarged Homestead Act of 1909. Lands where all minerals are federally owned are either public domain or lands whose surface was patented under the Stock Raising Homestead Act of 1916.

The primary economic use of public domain surface estate in the Resource Area is rangeland. Other significant land uses include wildlife habitat, watershed and recreation.

The major trade center in the western counties is Rapid City, with a 1980 census of 50,882 people. Other population centers include Belle Fourche, Spearfish, Sturgis, Buffalo, Hot Springs, Deadwood-Lead, Custer, Bison, Phillip, Kadoka, and Pierre.

HISTORICAL BACKGROUND

The oldest records are preserved in the geologic formations of the Resource Area (see Table 1-1). South Dakota was dominated by a series of inland marine seas, which deposited thousands of feet of sediment and in age range from 70 to 500 million years. The Black Hills were uplifted along with the Rocky Mountains 55 to 60 million years ago. Formation of the mountains allowed erosional forces to take over as the marine seas subsided and streams carved valleys, washing away sedimentary layers to expose the basement granites and other bedrocks in the Black Hills. The present features in western South Dakota consist of the sedimentary formations exposed in the valleys and benches and remnants being exposed along the major rivers and streams.

The Resource Area was first inhabited by nomadic hunters about 11,000 years ago. Throughout most of prehistory, the area supported band-level societies oriented toward hunting bison and other herbivores. As American populations expanded westward, some Indian groups living in the midwest were pushed onto the plains, where they adopted a nomadic lifestyle and displaced resident peoples. These late immigrant peoples were the historic tribes known to have lived in the area, including the Kiowas, Shoshone, Arapahoe, Cheyenne and Sioux.

Exploration of the Resource Area began as traders contacted the Missouri River village tribes in the last half of the 18th century and eventually took their trade west. **Military and scientific expeditions** were conducted from the 1830's through the 1870's. The 1874 exploration of the Black Hills region, led by Col. George A. Custer, sparked a gold rush and subsequent settlement.

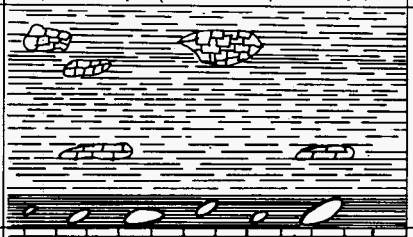
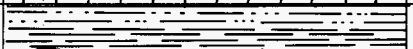
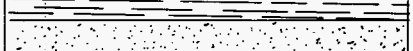
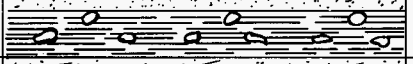
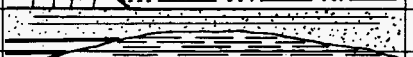
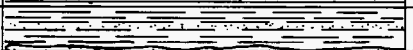
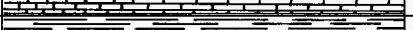
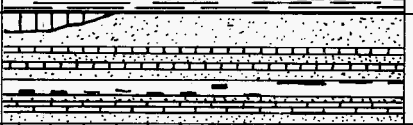
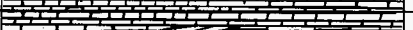
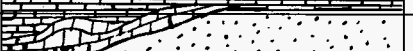
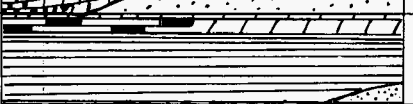
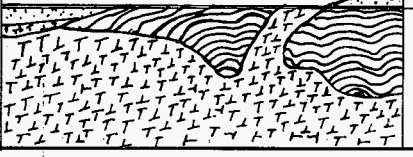
Since the Black Hills and surrounding plains region was home for these Indian tribes, the invasion by prospectors, settlers, and travelers led to serious disputes, including the Sioux Indian War of 1876. Some events of the war took place in the Resource Area. In 1878, Fort Meade was selected as a military post to protect the roads leading to the Black Hills. Fort Meade was closed as a military post and jurisdiction was transferred to the Veterans Administration in 1947. Since 1954, all but 1,159 acres of the original 7,730 acres of the Fort Meade military post were transferred to BLM jurisdiction.

PLANNING OVERVIEW

Several years ago, the BLM instituted a planning process centered around development of Resource Management Plans (RMPs) to guide management decisions affecting public resources. Prior to this, BLM prepared the Fort Meade Management Framework Plan (1973), Fort Meade Recreation Area Plan (1981) and the Exemption Area Management Framework Plan (1976). These plans are hereby incorporated by reference into this document and summarized in Appendix G.

During 1979, as mandated by Section 603(a) of FLPMA, all BLM administered lands were inventoried for wilderness characteristics. Based on this review, no wilderness study areas were identified in the Resource Area. Therefore, wilderness review processes will not be addressed in this plan.

An environmental assessment of the potential impacts associated with land management proposals is a major portion of this plan. The

	FORMATION	SECTION	THICKNESS IN FEET	DESCRIPTION
QUATERNARY	SANDS AND GRAVELS		0 - 50	Sand, gravel, and boulders.
MIOCENE AND OLIGOCENE	ARIKAREE FORMATION WHITE RIVER GROUP		0 - 1150	Sand, gravel, clay, fuller's earth, sandstone, and limestone
PALEOCENE	(Cannonball Marine Member) FORT UNION FORMATION (Ludlow Lignitic Member)		(0 - 225) (0 - 335)	Dark, fine-grained sandstone and shale. Yellowish to gray sandstone, clayey sandstone, shale and lignite.
UPPER CRETACEOUS	HELL CREEK FORMATION		425	Somber-colored soft brown shale and gray sandstone, with thin lignite lenses in upper part. Lower half more sandy. Many loglike concretions and thin lenses of iron carbonate.
	FOX HILLS SANDSTONE		25 - 200	Grayish-white to yellow sandstone.
	PIERRE SHALE		1200 - 2500	Principle horizon of limestone lenses giving tepee buttes. Dark-gray shale containing scattered concretions. Widely scattered limestone masses, giving small tepee buttes. Black fissile shale with concretions.
	NIOBRARA LIMESTONE		100 - 225	Impure chalky limestone and slate.
	Wall Creek Sands CARLILE SHALE		400 - 800	Light-gray shale with numerous large concretions and sandy layers. Dark-gray shale.
	GREENHORN LIMESTONE		25 - 80	Impure slabby limestone. Weathers buff.
?	Belle Fourche Shale		(500 - 850)	Dark-gray to black clayey shale. Sandy shale. Large calcareous concretions. Some bentonite.
	GRANEROS SHALE		800 - 1250	Thin limestone beds.
	Mowry Shale		(150 - 250)	Hard light-gray sandy shale. Fish scales. Bentonite.
	New Castle (Muddy) s.s.		(20 - 60)	Reddish to light yellow sandstone.
	Skull Creek Shale		(150 - 300)	Dark-gray to black clayey shale. Concretions. Some sandstone.
LOWER CRETACEOUS	DAKOTA SANDSTONE		10 - 200	Massive sandstone. Weathers brown.
	FUSON SHALE		10 - 188	Gray to purple shale. Thin sandstone.
	MINNEWASTE LIMESTONE		0 - 25	Massive gray limestone.
	LAKOTA SANDSTONE		25 - 485	Coarse, hard, crossbedded sandstone mostly buff to gray. Conglomerate locally and coal at base.
JURASSIC	MORRISON FORMATION		0 - 220	Maroon to green shale. Thin sandstone
	UNKPAPA SANDSTONE		0 - 255	Soft, massive, fine grained sandstones.
	SUNDANCE FORMATION		70 - 450	Greenish-gray shale, small ss. and ls. lenses, buff sandstone, red sandstone and shale.
	GYPSUM SPRINGS FORMATION		0 - 45	Gypsum and red shale grading to dolomite.
	NUGGET ? FORMATION		0 - 60	Massive cross-bedded salmon-colored sandstone.
TRIASSIC ?	SPEARFISH FORMATION		350 - 700	Red sandy shale, soft red sandstone and siltstone, with gypsum layers. Gypsum locally near base.
PERMIAN	MINNEKAHTA LIMESTONE		30 - 50	Massive gray, laminated limestone.
?	OPECHE FORMATION		50 - 135	Red shale and sandstone.
PENNSYLVANIAN	MINNELUSA SANDSTONE		300 - 850	Red, cross-bedded sandstone, limestone locally at the top. Interbedded sandstone, limestone, and shale. Sandstone with interbedded limestone, red shale at base.
MISSISSIPPIAN	PAHASAPA SANDSTONE		300 - 630	Massive light colored limestone. Dolomitic in part.
	ENGLEWOOD LIMESTONE		30 - 60	Pink to buff limestone. Shale locally at base.
ORDOVICIAN	WHITEWOOD FORMATION		0 - 130	Massive buff limestone underlain by sandstone, siltstone, and gray-green shale.
	?			
UPPER CAMBRIAN	DEADWOOD FORMATION		10 - 500	Massive to buff sandstone. Greenish glauconitic shale, flaggy dolomite and flat-pebble limestone conglomerate. Sandstone, with conglomerate locally at the base.
PRECAMBRIAN	Metamorphic and Igneous Rocks			Schist, slate, quartzite, and arkosic grit. Intruded by diorite, metamorphosed to amphibolite, and by granite and pegmatite.

From Dept. of Geology, S.D. State School of Mines - 1950

Black Hills generalized columnar section.

TABLE 1-1

planning process described in the BLM planning regulations 43 CFR Part 1600 consists of the following nine steps:

Step 1. Identification of Issues

The public, other federal agencies, and state and local governments were asked to identify public land management issues in the Resource Area through mailouts. An Open House was held July 12, 1982, followed by various meetings with state, federal and other officials and interested parties. BLM also identified issues and management concerns.

Step 2. Development of Planning Criteria

BLM developed planning criteria to identify the considerations and constraints that would be applied to the analysis throughout the planning process.

Step 3. Inventory and Data Collection

Resource specialists reviewed base data from existing and updated inventories and completed new ones. Existing plans were also reviewed to analyze recommendations, decisions and directives.

Step 4. Management Situation Analysis

This step analyzed the resources in relation to issues and concerns. It described the resources that would be affected in the plan, explained how the resources are currently being managed and listed options for future management. The Management Situation Analysis (MSA) also was used in developing the alternatives chapter (Chapter 2) and the affected environment chapter (Chapter 3). The complete MSA is on file for reference at the BLM Miles City District and South Dakota Resource Area Offices.

Step 5. Alternative Formulation

Options arising from the MSA were used to formulate a set of four initial alternatives. Management levels were developed to portray how the various resources would be used under changing program priorities. Specific actions proposed under each issue and alternative level were developed.

Step 6. Assessment of Alternatives

Resource specialists then described the environmental consequences of each level of resource use including biological, physical, economic and social effects.

This step is the environmental analysis required by the National Environmental Policy Act and is presented in Chapter 4.

Step 7. Selection of Preferred Alternative

The Preferred Alternative identified in Chapter 2 was formulated based on: (1) issues identified through the planning process; (2) criteria developed and considered by management; and (3) analysis of the impacts associated with the specific recommendations in each of the four alternatives. It was also analyzed for environmental impacts as described in Step 6 and is the primary focus of this document.

Step 8. Selection of Resource Management Plan

The eighth step is the plan selection and approval process. It will be completed following the review and incorporation of public comment on the draft RMP and will be implemented 30 days after the publication of the final RMP.

Step 9. Monitoring and Evaluation

The plan will be implemented according to the schedule included in the Record of Decision and final RMP. The implementation schedule will be subject to adjustment in relation to funding. Where additional information is needed for implementation, smaller, more focused activity plans will be developed. The effects of implementation will then be monitored and evaluated. Standards will be developed to determine the adequacy of mitigation measures, the measurement of impacts, and whether significant changes in related federal, state, or local land use plans have been made. Monitoring and evaluation reports will be available for public review.

ISSUES

Results of an internal preplanning analysis, input from the public and coordination with other governmental entities suggested two major issues to be analyzed in depth; vegetation apportionment and lands. These issues, including planning questions and criteria, were made public. The RMP steering committee, as identified in Chapter 5, finalized the two major issues.

Issue Number 1—Vegetation Apportionment

To meet its management goals of multiple use of the public lands and sustained yield of renewable resources like forage, BLM considers the vegetation requirements of watershed, wildlife and livestock. The majority of lands under BLM jurisdiction in the South Dakota Resource Area are grasslands (see Chapter 3, Range). The forage produced here is a public resource which has

traditionally been used for livestock grazing. Area ranchers who lease grazing privileges, derive economic benefits from the public lands proportionate to the amount of forage under lease.

Based on current information the allotments have been categorized as to the type of management they should receive. Categorization criteria were those shown in BLM Manual 1621 and 4100; e.g. resource potential, resource use conflicts or controversy, opportunity for positive economic return, the present management situation, and other criteria as appropriate (USDI-BLM 1984, USDI-BLM 1983).

Three management categories have been developed by the BLM. They are:

(1) Maintenance category (M)—objective is to maintain current resource condition.

(2) Improve category (I)—objective is to improve the current resource condition.

(3) Custodial category (C)—objective is to custodially manage the existing resource values.

Planning Questions

What should be the apportionment of vegetation resources to livestock grazing, watershed, and wildlife forage and cover?

Criteria

Vegetation is to be apportioned to livestock, watershed, and wildlife in a manner that will improve or maintain the condition of the vegetation and soil resources.

Issue Number 2—Lands

Many parcels of land administered by the BLM in South Dakota are small, isolated tracts which result in a fragmented ownership pattern. Lack of legal access and small size present an inefficient resource to manage.

Some land ownership adjustment is necessary to enhance the objectives of multiple use and sustained yield of renewable resources on public lands.

Planning Questions

What opportunities are available to reposition public lands and increase public access to them?

What opportunities are available to acquire lands with high public value?

Criteria

Consideration will be given to the public values in repositioning public lands. This includes consideration of:

—Ownership patterns;
—Existing and potential uses of surrounding land;
—Existing and potential access to lands;
—Exchange possibilities;
—Priority to gain **access** to those lands having significant existing or potential public values; and

—Incorporation of the principles of land pattern adjustment developed in Montana State Director guidance.